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ABSTRACT

Evaluation sheets and developmental checklists, prepared by three special education departments, are provided to facilitate continuous measurement of student progress in elementary school mathematics. One hundred forty-three objectives are given, and each is followed by a continuum-oriented set of worksheet-type pages on mathematics skills. The sheets were not intended to be used for seatwork or as a replacement for a school's present program in mathematics but to provide a fast means for evaluating each child's progress. No suggestions for diagnosis are included. The objectives cover content in number concepts; all operations with whole numbers, decimals, and fractions; adding and subtracting integers; commutative, associative, and distributive laws; problems in money, time, and units of measurement; and recognition of geometric figures. (DT)

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A MATH CONTINUUM

Developed under a Grant from Public Law 91-230 Part D

by the

SPECIAL EDUCATION DEPARTMENTS of

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Mr. Del Zander

Clarkston School District #J-250-185
Mr. Bud Phillips

Intermediate School District #102
Dr. Gary Larson

June 1972

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PURPOSE

This continuum oriented set of math precision teaching measurement sheets has been developed to provide a fast means of evaluating each child's progress. It is not intended to be used for seatwork or to replace your present program of mathematics but only to facilitate continuous measurement of student progress toward criterion.

SOURCE OF FUNDING AND ACKNOWLEDGEMENTS

The mathematics precision teaching materials contained herein were developed through Public Law 91-230, Part D grant. The grant was awarded to the special education departments of Walla Walla District #140, Clarkston District #J-250-185, and Intermediate School District #102 by the Department of Special Education of the Office of Superintendent of Public Instruction of Washington State.

The Special Education Directors of the above named districts wish to thank all of the teachers who spent many hours in developing the precision teaching evaluation sheets, the secretarial help for their hours of often tedious work, and the administrators of the school districts within I.S.D. #102 for the cooperation in this project.

REPRODUCTION OF EVALUATION SHEETS

As you require evaluation sheets and developmental checklists, you need only run each selected master sheet through a copy machine to produce a spirit duplicator master and reproduce the number desired. If you always replace the master sheet in its proper order within your set the materials will last indefinitely.

CORRECTION OF EVALUATION SHEETS AND REORDERING OF OBJECTIVES

It is hoped that this set of materials fits a well defined continuum of difficulty and that all evaluation sheets within the objective are highly accurate and usable. This however, considering the numbers of objectives and worksheets, is beyond what can realistically be expected. It is for this reason that we have built in a system whereby each teacher can help us make needed corrections and improvements. Whenever you find any problems which in your opinion need correction, reordering, or any other action, please complete the "Teacher Comments on Precision Teaching Evaluation Sheets" form, attach a copy of the objective or master sheets in question and return

them either to Mr. Del Zander of District #140, Mr. Bud Phillips of Clarkston District #J-250-185, or Dr. Gary W. Larsen of I.S.D. #102. Through this method we can in time, have an extremely useful set of mathematics materials for the evaluation of children's progress using precision teaching techniques.

COLLECTION OF NORMATIVE DATA

From time to time we will be gathering data concerning how well a child must perform at a given level before he can be placed in a regular classroom. If we have sufficient data, placements can be made with a good deal more assurance of the child's chances for success. As this data bank is completed we will publish the results for your use.

USE OF THE DEVELOPMENTAL CHECKLIST OF MATHEMATICAL ABILITY (DCMA)

The DCMA has been included as an aid to the teacher in screening children for placement on specific levels within the mathematics continuum. It should be used prior to placing any child into your mathematics program. After the child is once placed, the P.T. evaluation sheets and charting of the child's progress will tell you where he is functioning at any time. You may want to simply check off, or date the summary sheet when a student meets criterion at various levels. Time and money are not included in the DCMA. You may wish to use one or more of the P.T. worksheets to screen for difficulties in these areas.

Each child's summary sheet and screening device should be maintained within your files in a separate folder. This will allow easy access to it for current entries and will also facilitate research work as we evaluate the effectiveness of the materials.

TEACHERS COMMENTS ON PRECISION TEACHING

EVALUATION SHEETS*

Teacher	Grade	School

Objective Number	Drill sheet number/numbers

COMMENTS: _____

*Please be certain to attach copies of objectives and/or evaluation sheets. Send to your special education director or consultant listed in the section on corrections.

INDEX

PAGE	OBJECTIVE
1	Writing numbers from 1 to 10.
1	
2	
3	
4	
2	Writing numbers from 1 to 20.
1	
2	
3	
4	
3	Writing numbers from 1 to 50.
1	
2	
3	
4	Writing numbers from 1 to 100 in sequential order or on an ordered set of pictures for small blocks of numbers.
1	
2	
3	
5	Identifying what number comes after a given number, between two numbers, or before any given number for numbers to 100 with or without structured groups.
1	
2	
3	
4	
5	
6	Selecting which of two (or three) numbers is greater (greatest), smaller (smallest) for numbers to 100.
1	
2	
3	
4	
7	Reading and writing short sequences of numbers from any starting point to 200.
1	
2	
3	
4	
8	Completing exercises for counting by 10's from any starting point, limit to 200.
1	
2	
3	
9	Completing exercises for counting by 5's from 0 to 200 starting at multiples of 5.
1	
2	

10.....Completing exercises for counting by 2's from any starting point to 200, and identifying number as odd or even.

1
2
3
4

11.....Completing exercises for counting by 10's, 5's, or 2's, limit 200; starting only with multiples of the index number. (mixed exercises)

1
2
3
4
5
6
7
8

12.....Reading and writing numbers to 1000.

A
B
C
D
E

13.....Reading and writing short sequences backward or forward.

1
2
3
4
5

14.....Skip counting by 3's to 1000 backward or forward.

1
2
3
4
5

15.....Skip counting by 4's to 1000 backward or forward.

1
2
3
4

16.....Finding the sums and differences for addition and subtraction statements with "+" and "-" signs.

1
2
3
4
5

17.....Selecting other names for numbers by matching addition or subtraction expressions (N+M) with pictured groups or numbers to 12.

1
2
3
4
5

18.....Writing = or sign to identify true or not true addition or subtraction statements. Creating true number sentences by correcting incorrect sentences changing only one number.

1
2
3
4
5

19.....Completing addition and subtraction sentences with missing sums (differences) or addends associated with familiar number families. Sums to 12.

1
2
3
4
5
6
7
8
9
10
11
12

20.....Doing column addition with two addends for any two or three digit numbers, no carrying. Checking addition problems by adding in reverse direction.

1
2
3
4
5

21.....Solving column addition problems with three or more addends and sums to 20.

1
2
3
4
5

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A
B
C
D
E

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1
2
3
4
5

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1
2
3
4
5

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2
3
4
5

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1
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3
4
5

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1
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4
5

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B
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D
E
F

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1
2
3
4
5

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1
2
3
4
5

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1
2
3

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1
2
3

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1
2
3
4
5

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1
2
3
4
5

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1
2
3
4
5

36.....Subtraction, borrowing 10's or 100's - 3 digits.

1
2
3
4
5

37.....Subtraction borrowing 10's and 100's - 3 digits.

1
2
3
4
5

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1
2
3

39.....Adds with carrying for 4 or more place numbers with 2 addends.

1
2
3

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1
2
3
4
5

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2
3
4
5

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2
3
4
5

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2
3
4
5

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2

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2
3
4
5

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1
2

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1
2
3
4
5

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1
2
3
4

49.....Completing 2 multiplication statements, illustrating commutative principle.
1
2
3
4
5

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1
2

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1
2
3
4
5

52.....Dividing 2, 3, 4, 5 and 1 into 0.
1

53.....Filling in frames, missing quotient.
1
2
3
4
5

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4

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3

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3
4
5

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2
3
4
5

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1
2
3
4
5

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1
2
3
4
5

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1
2
3
4
5

61.....Using "ladder" division with 1 digit divisor, 2 or more digit dividend. No remainder.

1
2
3
4
5

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1
2
3
4
5

63.....Dividing with remainders, 1 digit factor, 2 or more digit products.

1
2
3
4
5

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1
2
3
4
5

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1
2
3
4
5

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1
2
3

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1
2
3
4
5
6
7

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4
5

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4
5

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1
2
3
4

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1
2
3
4
5

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1
2
3
4

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1
2

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1
2
3
4

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1
2
3
4
5
6

78.....Identifying ½, 1/3 and ¼ of a whole object. Circling fractions which show what part of an object is shaded. Stating what the terms ½, 1/3 and ¼ mean.

1
2
3
4
5

79.....Dividing a set of objects into 2, 3, 4 equal parts when instructed to divide a set into halves, thirds or fourths and identifying sets of objects into halves, thirds and fourths.

1
2
3
4
5

80.....Drawing a circle around 1/2, 1/3 or 1/4 of a set of objects and selects the fraction which describes the circled part of a given set.

1
2
3
4

81.....Identifying objects using 1/6, 1/8, 2/3 and 3/4.

1
2

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1
2
3
4
5

83.....Adding any 2 fractions with same denominator.

1
2
3
4

84.....Adding 2 fractions, same denominator 1/2's 1/3's, 1/4's, 1/6's, 1/8's only. Sums equal 1, 2, 3.

1
2
3
4
5

85.....Adding, subtracting mixed sets of problems. No borrowing, no carrying. Vertical or horizontal form, sums to 99.

1
2
3

86.....Solving one-step problems adding and subtracting money, time and measurement. Values to 18.

1
2
3
4
5

87.....Inserting + or - to complete an equation.

1
2
3
4
5

88.....Adding and subtracting. Vertical or horizontal. Money and time and measurement. No carrying/borrowing. To 2000.

1
2
3
4
5
6
7
8

89.....Adding and subtracting. Vertical or horizontal. Money and time and measurement. With carrying and borrowing.

1
2
3
4
5
6

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1
2
3
4
5

91.....Multiplying, dividing combinations through 9 x 9, 81 ÷ 9.

1
2
3
4

92.....Supplying missing sign > < , or = for combinations of +, -, x or ÷ .

1
2
3
4

93.....Mixing exercises in multiplication and division.
1
2
3
4

94.....Supplying missing > < or = in addition, subtraction, multiplication and division problems.
1
2
3
4
5

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1
2
3
4

96.....Adding, subtracting, multiplying and dividing decimals to 2 places.
1
2
3
4
5
6
7
8
9
10
11

97.....Recognizing a penny, nickel, dime.

98.....Matching coins with a numerical value, word "cent" used.
1

99.....Ability to recognize a quarter.

100.....Finding values, pennies and nickels, using ¢ sign. Sums to 12¢
1
2

101.....Matching a quarter with its numerical value or with the value in other coins.
1
2

102.....Finding the value of pennies, nickels, dimes and quarters. Finding equivalent coin combinations, limit 99¢
1
2
3
4

103.....Identifying coins using pennies, nickels, dimes and/or quarters. Total a collection of coins and indicate if they are enough to buy an article. Limit 99¢
1
2
3

104.....Using decimal point and $ in writing money values, for $.10, $.25, $1.00 and $1.50 only.
1
2

105.....Identifying 1/2 dollar, dollar, finding value, using dollar sign.
1
2

106.....Adding subtracting money value. Horizontal/vertical. 2 addends. Sums to $1.00.
1
2
3

107.....Totaling coins, bills, greater, less or equal.
1
2
3

108.....Writing money values using signs.
1
2
3

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1
2
3
4

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1
2

111.....Identifying change in coins with purchase amounts up to $10.00.
1
2
3

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1
2

113.....Totaling and purchasing amounts less than $10.00. Indicating change. Counting out change starting with the total value of the purchase.
1
2
3
4

114.....Multiplying and dividing money values using $ and decimal point. 1 digit multiplier/divisor. Limit $20.00.
1
2
3

115.....Writing numerals to 12 on clock face.
1
2
3

116.....Giving only hour hand pointing between 2 numerals identifying intervals as "before" and "after".
1
2
3

117.....Placing an arrow on a "clock" number line to identify a given number of marks after the arrow to the end.
1

118.....Counting marks and/or places of an arrow on clock number line which is bent into a circle to form a clock face. Responding to word "minutes".
1
2

119.....Selecting matching clock faces.
1

120.....Matching clock face to printed time.
1

121.....Selecting printed time to match clock face.
a
b

122.....Drawing hour, minute hand, drawing both to show printed time.
a
b
c

123.....Writing down other way to state time.
1
2
3

124.....Matching time statements and clock faces.
a
b
c
d

125.....Supplying minute count.
1
2
3
4

126.....Supplying hour statement.
1
2
3
4
5
6
7
8

127.....Writing time from clock face.
1
2
3
4

128.....Drawing time on face from statement.
1
2
3
4

129.....Demonstrating comparative concepts.
a
b
c
d

130.....Recognizing use of ruler, yardstick.
a
b
c
d

131.....Ruler dividing, inches, 3 rulers = 1 yard.
a
b
c
d
e

132.....Identifying dizen, one-half objects.
a
b
c
d
e
f

133.....Measuring objects to nearest inch.
a
b
c
d

134.....Solving measurement problems involving 12 inches in a foot. Differentiating measurements stated in inches and feet. Limit 3 feet.
a
b
c
d

135.....Stating and showing cups per pint, pints per quart and reverse.
a
b
c
d

136.....Problems 3 ft. = 1 yd.; 36 in. = 1 yd.
a
b
c
d

137.....Using equivalent liquid measures.
a
b
c
d

138.....Word problems = equivalent measures.
a
b
c
d

139.....Measuring length of lines or objects (up to 36 inches) nearest 1/4 inch.
a
b
c
d

140.....Measuring lines, objects to nearest 1/4 inch.
a
b
c
d

141.....Identifying figures, circle, square, triangle, rectangle.
a
b
c
d

142.....Reproducing circle, square, triangle, rectangle from memory.
a
b
c
d
e

143.....Reading directions with names of simple geometric figures.
a
b
c
d

DEVELOPMENTAL CHECKLIST OF MATHEMATICAL ABILITY

Name_____ Sex_____ School_____

Teacher_____ Grade_____ Date_____ By_____

Test Areas

Check deficiencies

Yes No

Section I: Concepts of Numbers and Numerals

a. Counting orally
___ ___ by 2's
___ ___ by 3's
___ ___ by 5's
___ ___ by 10's
___ ___ by 20's
___ ___ by 25's
___ ___ by 100's
___ ___ b. Recognition of sets
___ ___ c. Writing numbers is sequence
___ ___ d. Missing number identification
___ ___ e. Visual indentification of numbers
___ ___ f. Distinguishing relationships
___ ___ g. Odd and even numbers

Section II: Place Value

___ ___ a. Ones
___ ___ b. Tens
___ ___ c. Hundreds
___ ___ d. Thousands

Section III: Addition

___ ___ a. Basic number combinations
___ ___ b. Missing addends
___ ___ c. Horizontal
___ ___ d. Two and three digit numbers
___ ___ e. Regrouping
___ ___ f. Column addition
___ ___ g. Decimals

Section IV: Subtraction

___ ___ a. Basic facts
___ ___ b. Missing number
___ ___ c. Horizontal
___ ___ d. Two digit
___ ___ e. Three digit
___ ___ f. Regrouping
___ ___ f. Decimal

Section V: Multiplication

___ ___ a. Basic facts
___ ___ b. Missing multiplier
___ ___ c. One digit multiplier
___ ___ d. Two digit multiplier
___ ___ e. Three digit multiplier
___ ___ f. Decimals
___ ___ g. Horizontal

Section VI: Division

___ ___ a. Horizontal (Basic)
___ ___ b. One digit divisor
___ ___ c. Two digit divisor
___ ___ d. Remainders

SECTION VII: Fractions

___ ___ a. Beginning identification
___ ___ b. Finding fractional parts
___ ___ c. Addition of fractions
___ ___ d. Subtraction of fractions
___ ___ e. Multiplication of fractions

SECTION VIII: Story Problems

___ ___ a. Using addition
___ ___ b. Using subtraction
___ ___ c. Using multiplication
___ ___ d. Using division

SECTION I: Concepts of Numbers and Numerals

A. Oral Number Identification "Lower grades"

1. Count by 2's? To _____.
2. Count by 3's? To _____.
3. Count by 5's? To _____.
4. Count by 10's? To _____.
5. Count by 20's? To _____.
6. Count by 25's? To _____.
7. Count by 100's? To _____.

B. Recognition of Sets

1. "Draw a set of three circles."

2. "Circle a set of five." / / / / / /

3. "Draw a set one more than this set." / / /

C. Writing Numbers in Sequence

"Let's see how far you can write your numbers."

D. Missing Number Identification

"Fill the missing numbers in the blanks."
(Circle the incorrect responses)

1. 2___4
2. 7___9
3. 67___
4. ___34
5. ___5___ ___
6. 23 23 ___ ___ ___
7. ___ 30 ___
8. ___ 200___ ___

9. 30 40 50 ___ ___
10. 500 600 ___ ___
11. 2 4 6 ___ ___
12. 20 18 16 ___ ___
13. 45 50 55 ___ ___
14. 24 27 30 ___ ___

E. Visual Identification of Numbers

"Say these numbers as I point to each."
(Circle incorrect responses)

6 7 1 5 2 8 4 3 113 15 13
16 11 18 14 12 17 201 19 21
32 42 54 65 76 87 92 503 812
1003

F. Distinguishing Relationships

"Underline correct answer."

1. 5 is (less than / greater than) 4?

2. 20 is (less than / greater than) 25?

3. 32 is (less than / greater than) 33?

4. 114 is (less than / greater than) 111?

5. 54 is 2 (less than / greater than) 52.

6. One less than 45 equals (72) (44) (46) (42)

7. 3 is to the (right / left) of 4.

8. 9 is to the (right / left) of 7.

9. 6 is (> / <) 0.

10. 2 is (< / >) 5.

11. 14 is (< / >) 17.

12. 89 is (> / <) 91.

C. Odd and Even Numbers

"Underline the odd numbers."

1 2 3 4 5 6 7 8 9 10 13 20

72 56 44

"Underline the even numbers."

8 9 10 11 12 2 3 9 4 1 84

54 36

SECTION II: Place Values

A. Ones

1. 6 ones equal _____.

2. 7 ones equal _____.

3. 10 ones equal _____.

B. Tens

1. 2 tens equal _____.

2. 8 tens equal _____.

3. One ten and 7 ones equal _____.

4. Four 10's and 3 ones equal _____.

5. Five ones and 6 10's equal _____.

6. 64 equals ____ tens and ____ ones.

7. 19 equals ____ tens and ____ ones.

C. Hundreds

1. Ten 10's equal ____ 100's.

2. 30 tens equal ____ 100's.

3. 100, 4 tens, and 6 ones equals ____.

4. 5 ones, three 100's, and 0 tens equals _____.

5. Eight 100's, 9 tens, and 2 ones equal _____.

D. Thousands

1. Six 1000's and four 100's equal ____

2. Eight 1000's and three 100's equal (80300, 8030, 8003, or 8300)

3. Twelve 100's and 12 ones equal (1212, 120,012, or 12,012)

SECTION III: Addition
(Circle Incorrect Responses)

A. Basic Number Combinations

1. 2 + 2 = _____.

2. 6 + 4 = _____.

3. 7 + 3 = _____.

B. Missing Addends

1. 3 + _____ = 5

2. _____ + 8 = 10

3. 5 + _____ = 8

C. Horizontal

1. (3 + 4) + 1 = _____ + 1

2. 5 + (5 + 1) = 5 + _____.

D. Two and Three Digit Numbers

14	20	36	10	113	250	308
+73	+40	+20	+ 9	+204	+110	+ 21
___	___	___	___	___	___	___

E. Regrouping

42	14	296	.45	6855	6429
+49	+ 7	+145	+.35	+2796	+2796
___	___	___		___	___

F. Column Addition

26	6	4
52	36	4
35	18	3
___	___	8
		___

G. Decimals

$1.04	$2.56	1.12
+ .17	+ 3.45	.36
___	___	.29
		.54
		___

SECTION IV: Subtraction

A. Basic Facts

5 - 2 = _____. 8 - 3 = _____.

7 - 0 = _____. 1 - 1 = _____.

10 - 6 = _____.

B. Missing Numbers

4 - ___ = 2. 1 - _____ = _____.

7 - ___ = 4.

C. Horizontal

14 - 8 = _____. 18 - 9 = _____.

19 - 3 = _____.

D. Two Digit

15	19	46	25
- 1	- 7	-13	-21
___	___	___	

E. Three Digit

897	729
-417	-603
____	____

F. Regrouping

24	38	117	102	110	828
- 9	- 9	- 62	- 81	- 29	-139
____	____	____	____	____	____

516	500	8491	1234
-468	-421	-6289	- 526
____	____	____	____

G. Decimal

$ .95	$8.45	$62.04
- .42	- 3.98	- 5.30
____	____	____

SECTION V: Multiplication

A. Basic Facts

1.	2 × 2 = ____.	4.	5 × 2 = ____.
2.	5 × 3 = ____.	5.	4 × 1 = ____.
3.	4 × 3 = ____.	6.	6 × 0 = ____.

7. $7 \times 6 =$ ____

8. $8 \times 7 =$ ____

9. $4 \times 10 =$ ____

B. Missing Multiplier

1. $4 \times$ ____ $= 12$

2. $3 \times$ ____ $= 21$

3. $1 \times$ ____ $= 3$

4. $6 \times$ ____ $= 18$

5. $7 \times$ ____ $= 28.$

C. One Digit Multiplier

14	20	312	201	200
× 2	× 9	× 3	× 4	× 8
____	____	____	____	____

D. Two Digit Multiplier

31	12	25	200	102
×23	×40	×12	× 37	× 56
____	____	____	____	____

E. Three Digit Multiplier

362
×279
____

F. Decimals

.3	7.96	6.23	$4.35
×.4	×30.8	×12.7	× 3
___	_____	_____	_____

G. Horizontal

50 × (2 + 4) = _____.

70 × 40 = _____. 50 × 600 = _____.

SECTION VI: Division

A. Horizontal (basic)

8 ÷ 2 = _____.
9 ÷ 3 = _____.
12 ÷ 4 = _____.
10 ÷ 1 = _____.

$ .48 ÷ 2 = _____.
680 ÷ 2 = _____.
$ .96 ÷ 3 = _____.

B. One Digit Divisor

$3\overline{)6}$ $4\overline{)8}$ $5\overline{)5}$ $2\overline{)82}$

$3\overline{)93}$ $2\overline{)124}$

C Two digit divisor

$15\overline{)90}$ $60\overline{)1200}$ $40\overline{)4080}$ $36\overline{)144}$

D. Remainders

$2\overline{)9}$ $7\overline{)15}$ $3\overline{)610}$ $2\overline{)197}$

$5\overline{)151}$ $8\overline{)\$24.38}$

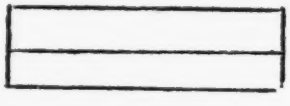
SECTION VII:

Fractions

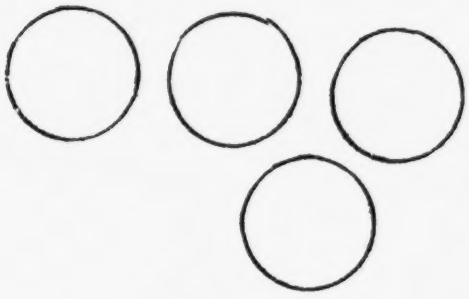
A. Beginning identification

"Shade ½ of the circle "

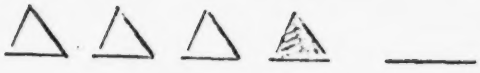
"Shade ½ of this box "



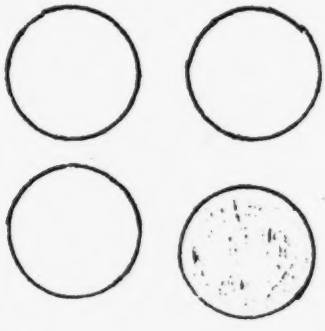
"Shade 2/3 of this circle."



"Circle ½ of the balls."



"Write the fraction for the shaded triangle."



"Write the fraction for the shaded circle ."

B. Finding fractional part

1/2 of 8 = ____ 1/2 of 2 = ____

1/2 of 12 = ____ 1/2 of 6 = ____

1/3 of 15 = ____ 1/3 of 24 = ____

1/3 of 99 = ____ 1/3 of 18 = ____

1/4 of 36 = ____ 1/5 of 15 = ____

1/5 of 45 = ____

$\frac{12}{2}$ = ____ $\frac{4}{2}$ = ____ $\frac{18}{3}$ = ____ $\frac{20}{10}$ = ____

Which is greater, 1/4 or 1/3? ____

$\frac{2}{8} = \frac{\quad}{4}$ $\frac{3}{6} = \frac{\quad}{2}$ $\frac{2}{3} = \frac{\quad}{12}$

C Addition of fractions

$\frac{1}{5} + \frac{3}{5} = \frac{\quad}{\quad}$ $\frac{5}{8} + \frac{2}{8} = \frac{\quad}{\quad}$ $\frac{2}{8} + \frac{4}{8} = \frac{\quad}{\quad}$ $\frac{2}{3} + \frac{1}{3} = \frac{\quad}{\quad}$ $\frac{7}{8} + \frac{1}{8} = \frac{\quad}{\quad}$ $\frac{1}{4} + \frac{1}{4} = \frac{\quad}{\quad}$ $\frac{3}{6} + \frac{2}{6} = \frac{\quad}{\quad}$

$1\frac{1}{4} + 1\frac{1}{4} = \frac{\quad}{\quad}$ $2\frac{1}{3} + 1\frac{1}{3} = \frac{\quad}{\quad}$ $1\frac{3}{8} + 2\frac{3}{8} = \frac{\quad}{\quad}$ $3\frac{2}{4} + 2\frac{1}{4} = \frac{\quad}{\quad}$ $\frac{1}{3} + \frac{1}{2} = \frac{\quad}{\quad}$ $4\frac{5}{6} + 3\frac{1}{3} + 2\frac{1}{2} = \frac{\quad}{\quad}$

$1\frac{3}{4} = \frac{\quad}{4}$

D. Subtraction of fractions

$\frac{2}{3} - \frac{1}{3} =$ ____ $\frac{7}{9} - \frac{5}{9} =$ ____ $1 - \frac{1}{8} =$ ____

$3\frac{3}{4} - 2\frac{2}{4} =$ ____ $6\frac{3}{4} - 1\frac{1}{4} =$ ____ $9\frac{5}{8} - 2\frac{1}{8} =$ ____ $5\frac{7}{8} - \frac{1}{8} =$ ____ $3\frac{7}{8} - 2\frac{2}{4} =$ ____ $\frac{4}{4} - \frac{2}{4} =$ ____

$5 - 1\frac{1}{3} =$ ____

E. Multiplication of fractions

$\frac{1}{3} \times \frac{1}{3} =$ ____ $\frac{1}{2} \times \frac{2}{4} =$ ____

$\frac{1}{2} =$ ____% $\frac{3}{8} =$ ____ % 75% = ____

SECTION VIII: Story Problems

A. Addition

1. Jim had 2 pennies. His mother gave him 2 more pennies. How many pennies did he have in all? ____

2. Tom had a dime and Bev gave him a nickel. How much money did he have? _____cents

B. Subtraction

1. Peter had 6 arrows. Jim had 4 arrows. How many more arrows does Peter have than Jim? _____

2. Jim had 3 dimes and a nickel. He spent 31 cents on ice cream. How much did he have left? ____ cents

C. Multiplication

1. One boat has 2 oars. How many oars do 3 boats have? _____

2. 3/4 of a year is how many months? _____

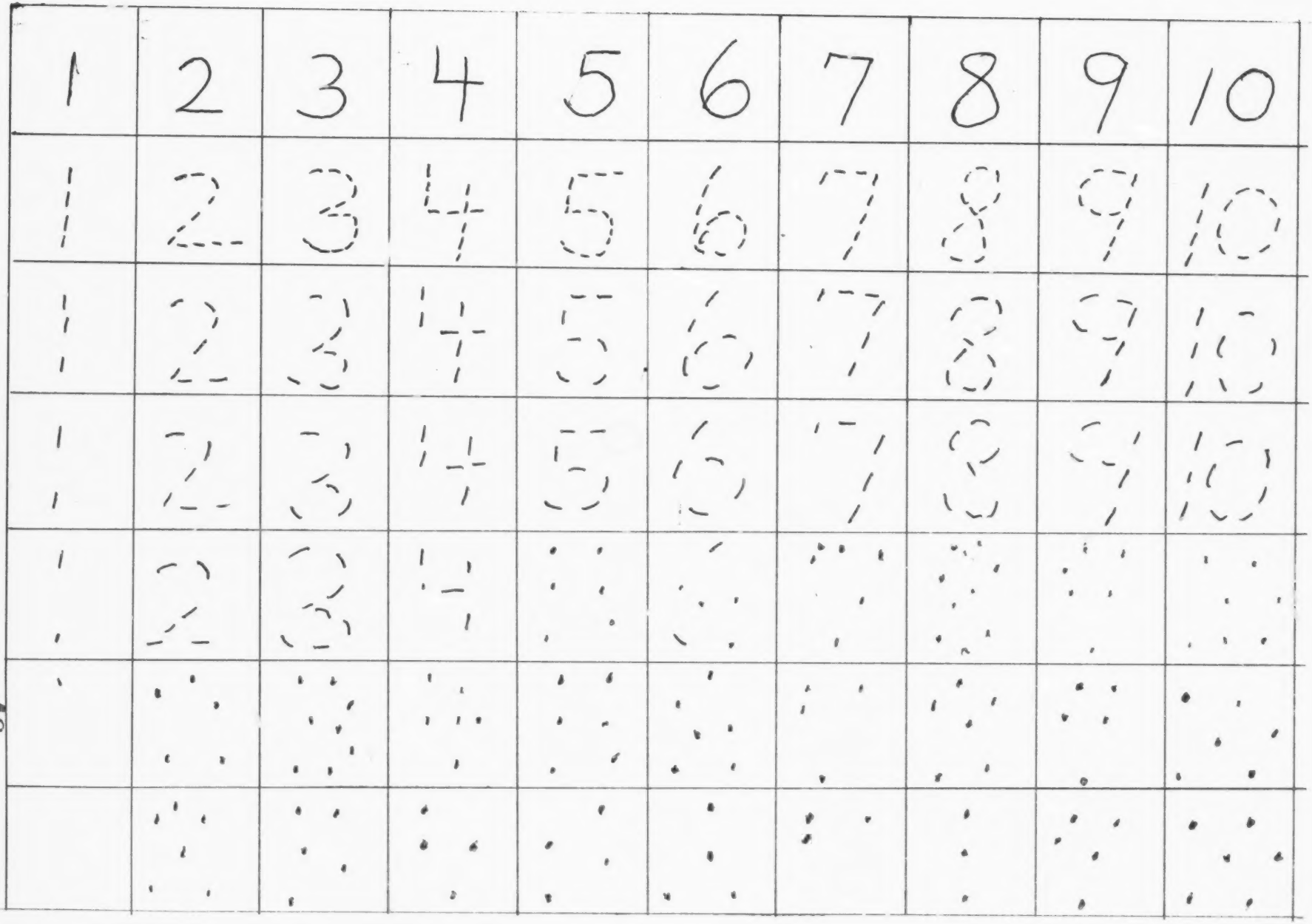
D **Division**

1. How many minutes are in 1/2 hour?
   _____ minutes

2. Mother made 12 cupcakes. She put them in 3 boxes. How many cupcakes did she put in each box? _____

Writing numbers from 1 to 10.

NAME DATE CLASS TIME COUNT



NAME DATE CLASS TIME COUNT

1	2	3	4	5	6	7	8	9	10

41

NAME DATE CLASS TIME COUNT

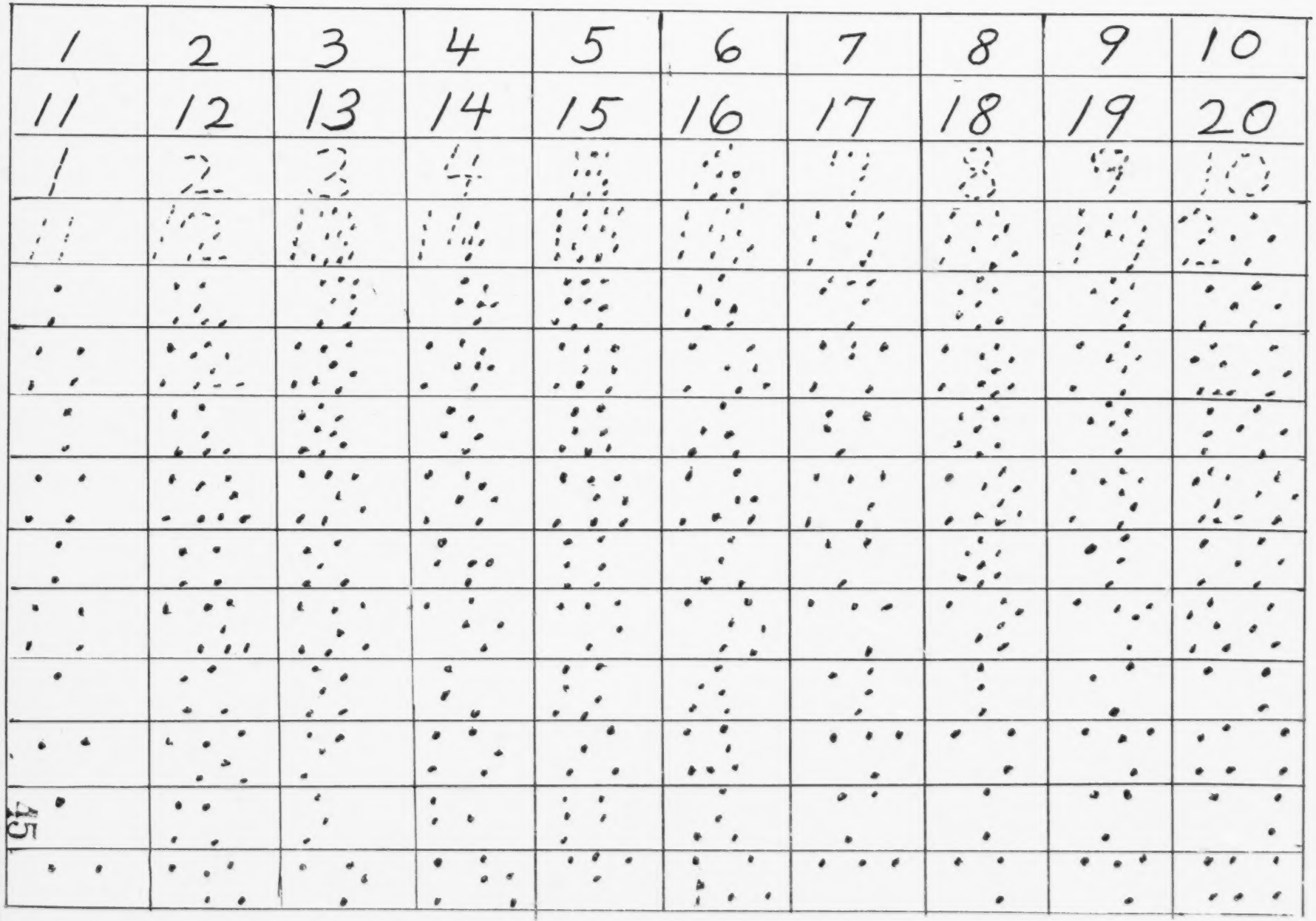
1, 2, 3, 4, 5, 6, 7, 8, 9, 10

42

NAME DATE CLASS TIME COUNT

Writing numbers from 1 to 20.

NAME DATE CLASS TIME COUNT



NAME DATE CLASS TIME COUNT

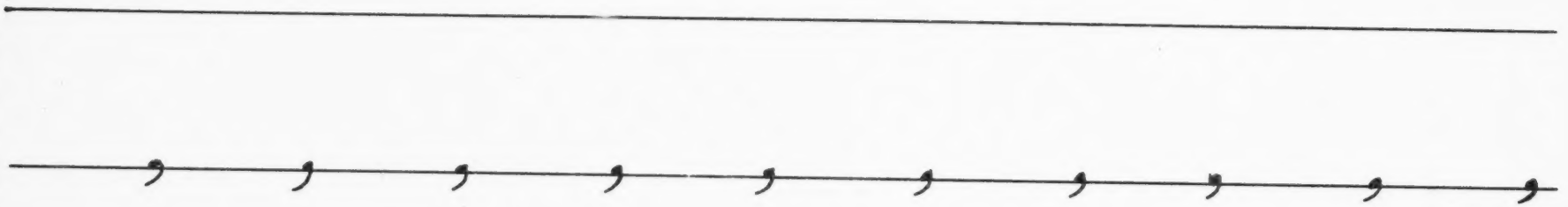
1	2	3	4	5	6	7	8	9	10
46									

NAME DATE CLASS TIME COUNT

1, 2, 3, 4, 5, 6, 7, 8, 9, 10,

47

NAME DATE CLASS TIME COUNT



48

Writing numbers from 1 to 50.

NAME DATE CLASS TIME COUNT

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
50									

NAME DATE CLASS TIME COUNT

1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
11, 12, 13, 14, 15, 16, 17, 18, 19, 20,
21, 22, 23, 24, 25, 26, 27, 28, 29, 30,
31, 32, 33, 34, 35, 36, 37, 38, 39, 40,
41, 42, 43, 44, 45, 46, 47, 48, 49, 50

CT

NAME DATE CLASS TIME COUNT

1

50

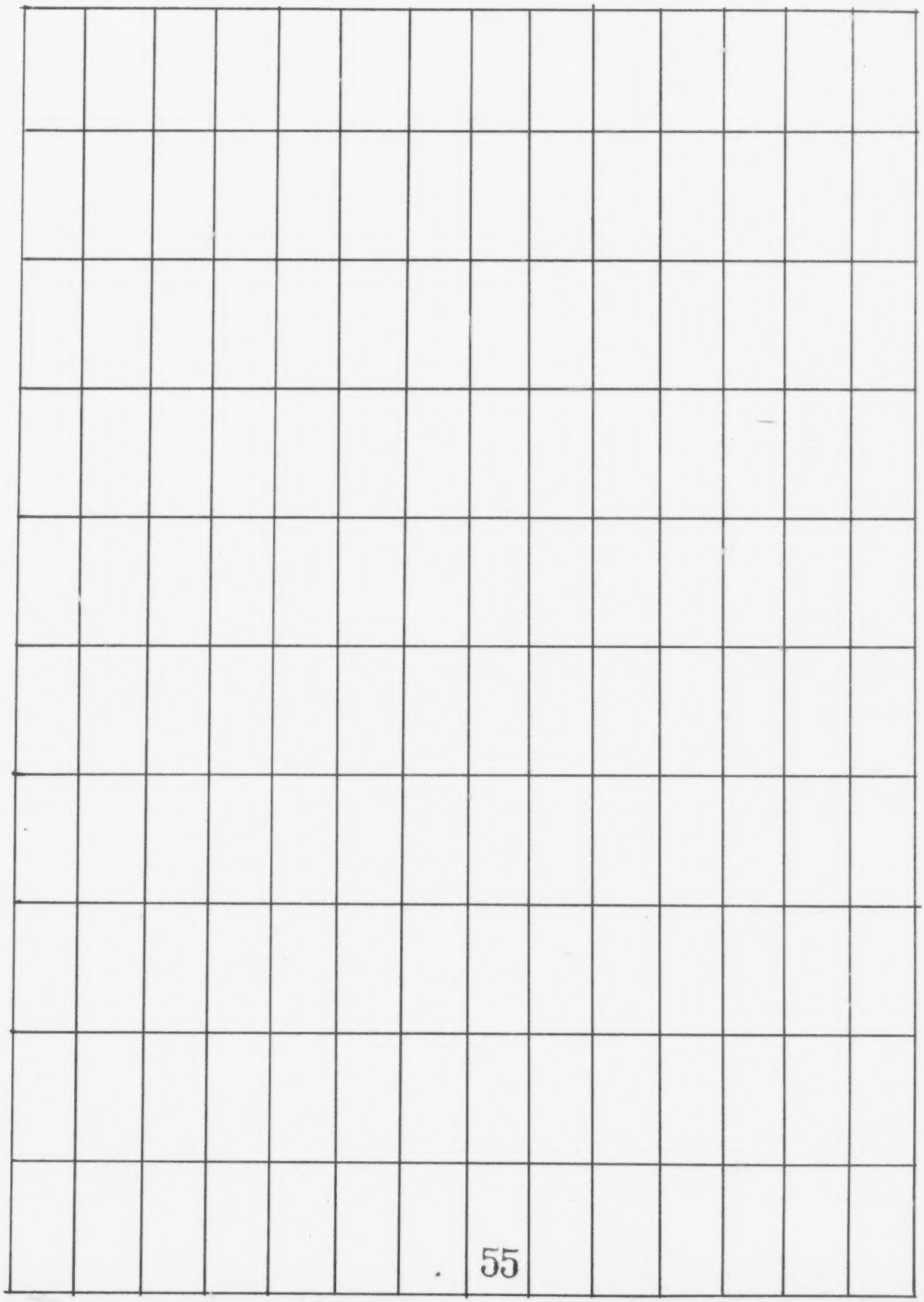
52

Writing numbers from 1 to 100 in sequential order or on an ordered set of pictures for small blocks of numbers.

NAME DATE CLASS TIME COUNT

41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
54									

NAME DATE CLASS TIME COUNT



NAME DATE CLASS TIME COUNT

1, , , , , , , , , 10,

Identifying what number comes after a given number, between two numbers, or before any given number for numbers to 100 with or without structured groups.

NAME DATE CLASS TIME COUNT

5		7	X	11		X	20		22
15		X	26		28	X	31		33
19		X	37		39	X	43		X
51		53	X		60	X	65		67
58 19		X	69		71	X	81		X
9		X	41		43	X	93		95
83		85	X	90		X	91		93

AME DATE CLASS TIME COUNT

11		13	X		7	X	9		X
22		24	X		33	X	56		58
59	27	X	41		43	X		60	X
71		73	X		52	X	19		21
X		29	X	45		47	X		39
83		85	X		15	X	29		31
50		52	X		66	X	46		48

NAME DATE CLASS TIME COUNT

14		16	X		11	X		46	X
60	33	X	91		X	56		58	X
61		63	X	71		X		14	X
91		93	X		20	X	24		26
	43	X	54		X	99		101	X
77		79	X		65	X	72		74
	50	X	105		107	X		31	

NAME DATE CLASS TIME COUNT

18		20	X		40	X	0		2
61	100	X	56		X		80		X
16		18	X		94		X	109	
89		91	X	61		63	X		30
101		103	X	105		107	X	116	
131		133	X	120		122	X		100
	78	X	54		56	X	140		142

AME DATE CLASS TIME COUNT

	115		117	X	11		X		37
56	57		59	X		21	X	98	
62		10	X		73	X	105		107
17			20	X		35	X	19	
	61		63	X		16	X	43	
	112		114	X		30	X	15	
	96		X	51		53	X		80

Selecting which of two (or three) numbers is greater (greatest), smaller (smallest) for numbers to 100.

NAME DATE CLASS TIME COUNT

3	2	X	9	7	X	14	16	X	29	31
19	20	X	15	17	X	13	14	X	0	1
19	18	X	23	24	X	34	33	X	20	21
31	32	X	25	26	X	40	39	X	36	35
42	41	X	27	28	X	46	45	X	12	11
61	60	X	49	50	X	26	27	X	47	46
73	72	X	77	76	X	81	82	X	84	83

NAME DATE CLASS TIME COUNT

6	5	7	X	1	2	0	X	10	9	11
21	20	19	X	3	5	4	X	14	12	13
16	15	14	X	23	24	25	X	31	30	29
18	20	19	X	34	33	35	X	36	37	35
20	21	19	X	47	48	46	X	40	39	38
51	52	53	X	49	47	48	X	69	70	71
41	40	42	X	39	40	41	X	64	66	65

65

NAME DATE CLASS TIME COUNT

10	11	X	6	5	X	0	1	X	X
X	17	16	X	3	2	X	9	8	X
20	19	X	18	17	X	13	14	X	X
25	24	X	29	30	X	7	8	X	X
99 X	10	9	X	31	32	X	43	44	X
46	47	X	49	48	X	12	11	X	X
20	19	X	36	37	X	51	52	X	X

NAME DATE CLASS TIME COUNT

7	8	6	X	16	18	17	X	9	10	11
21	19	20	X	31	29	30	X	15	14	13
29 0	1	2	X	35	36	37	X	34	32	33
X	42	41	40	X	49	47	48	X	44	43
18	19	20	X	51	53	52	X	66	64	65
83	84	82	X	79	78	77	X	59	58	60
63	61	62	X	99	98	97	X	68	66	67

Reading and writing short sequences of numbers from any starting point to 200.

NAME DATE CLASS TIME COUNT

7									
				21	X	61			
69							72	X	49
					55	X	26		
									38
43									
	54	X	97						103

NAME DATE CLASS TIME COUNT

13									
			26	X	51				
70							64	X	39
						46	X	33	
				39	X	80			
					88	X	100		
									112

NAME DATE CLASS TIME COUNT

2									
			15	X	25				
71						36	X	18	
				24	X	49			
				57	X	99			
			106	X	83				
		90	X	72					77

NAME DATE CLASS TIME COUNT

81						87	X	73	
			78	X	165				
72		172	X	99					104
210									219
56					61	X	48		
			54	X	330				334
22									31

Completing exercises for counting by 10's from any starting point, limit to 200.

NAME DATE CLASS TIME COUNT

10	20	30	40	50	60	70	80	90	100
60									
120									
40									
90									
150									
170									

NAME DATE CLASS TIME COUNT

50									
10									
90									
130									
40									
200									
70									

NAME DATE CLASS TIME COUNT

30									
100									
.50									
76 210									
10									
250									
80									

Completing exercises for counting by 5's from 0 to 200 starting at multiples of 5.

NAME DATE CLASS TIME COUNT

5	10	15	20	25	30	35	40	45	50	55
60	65									
125										
160										
25										
200										
55										

NAME DATE CLASS TIME COUNT

25	30	35								
5										
65										
79 90										
125										
55										
225										

Completing exercises for counting by 2's from any starting point to 200, and identifying number as odd or even.

NAME DATE CLASS TIME COUNT

2	4	6	8	10	12	14	16	18	20
42									
18									
81 62									
24									
56									
38									

NAME DATE CLASS TIME COUNT

1	3	5	7	9	11	13	15	17	19
21									
28 17									
55									
33									
69									
41									

NAME DATE CLASS TIME COUNT

1	3	5							
23									
67									
95									
19									
41									
37									

NAME DATE CLASS TIME COUNT

6									
11									
84 33									
12									
24									
19									
7									

Completing exercises for counting by 10's, 5's, or 2's, limit 200; starting only with multiples of the index number. (mixed exercises)

NAME DATE CLASS TIME COUNT

2		6		10		14		18	
22		26		30		34		38	
42		46		50		54		58	
62		66		70		74		78	
82		86		90		94		98	
102		106		110		114		118	
122		126		130		134		138	
142		146		150		154		158	
162		166		170		174		178	
182		186		190		194		198	

NAME DATE CLASS TIME COUNT

2			8				16		20
	24			30		34		38	
		46			52				60
62			68			74	76		
	84			90				98	
102			108		112			118	
28	124			130		134			140
		146			152		156		
		166		170				178	
182			188			194			200

NAME DATE CLASS TIME COUNT

2, 4, ____, 8, ____, 12, ____, 16, ____, 20, ____,

24, ____, 28, ____, 32, ____, 36, ____, 40, ____,

44, ____, 48, ____, 52, ____, 56, ____, 60, ____,

64, ____, 68, ____, 72, ____, 76, ____, 80, ____,

84, ____, 88, ____, 92, ____, 96, ____, 100, ____,

104, ____, 108, ____, 112, ____, 116, ____, 120, ____,

124, ____, 128, ____, 132, ____, 136, ____, 140, ____,

144, ____, 148, ____, 152, ____, 156, ____, 160, ____,

164, ____, 168, ____, 172, ____, 176, ____, 180, ____,

184, ____, 188, ____, 192 ____, 196 ____, ____

NAME DATE CLASS TIME COUNT

5		15		25		35		45	
55		65		75		85		95	
105		115		125		135		145	
155		165		175		185		195	

5	10		20		30		40		50
68	60		70		80		90		100
	110		120		130		140		150
	160		170		180		190		200

NAME DATE CLASS TIME COUNT

5, ___, ___, 20, ___, ___, 35, ___, ___, 50,

55, ___, 65, ___, ___, 80, ___, ___, 95, ___,

105, ___, ___, 120, ___, ___, 135, ___, ___, 150,

___, ___, 165, ___, ___, ___, 185, ___, ___, 200.

5, 10, ___, ___, 25, 30, ___, ___, 45, 50,

___, ___, 65, 70, ___, ___, 85, 90, ___, ___,

105, 110, ___, ___, 125, 130, ___, 140, ___, ___,

155, ___, 165, ___, 175, 180, ___, ___, 195, ___.

NAME DATE CLASS TIME COUNT

10, ____, 30, ____, 50, ____, 70, ____, 90, ____,

110, ____, 130, ____, 150, ____, 170, ____,

190, ____.

91

10, 20, ____, 40, ____, 60, ____, 80,

____, 100, ____, 120, ____, 140, ____,

160, ____, 180, ____, 200.

NAME DATE CLASS TIME COUNT

10, ___, 30, ___, ___, 60, ___, 80, ___, ___,

110, ___, ___, ___, 150, ___, ___, ___, ___, 200.

92

10, ___, ___, ___, 50, ___, ___, ___, ___, 100,

___, ___, ___, ___, 150, ___, ___, ___, ___, 200.

10, ___, ___, ___, ___, ___, ___, ___, ___, ___,

___, ___, ___, ___, ___, ___, ___, ___, ___, 200.

NAME DATE CLASS TIME COUNT

5									
93									
									200
10									
									200

Reading and writing numbers to 1000.

NA ME DATE CLASS TIME COUNT

1	2	3		5	6		8	9			12	13		
16		18	19			22		24	25			28	29	
	32	33					38			41	42			45
46			49		51	52			55			58		60
61	62					67	68	69					74	75
76			79				83					88		
89	92	93			96	97						103		
106	107		109					114	115					
121	122			125			128	129						
136				140	141					146			149	
		153					158	159						
166				170		172				176				
	182							189			192			195
196			199					204		206			209	